In the Claims:

Please amend the claims as follows:

1. A method for growing large, single polytype, compound crystals of one of a) silicon carbide, b) a group III-nitride c) alloys thereof, the method comprising:

providing, in a heated growth enclosure comprising a seed crystal, a mixture of vapor species containing at least the elements of the compound crystal, in such a way that, at least one of the elements is continuously fed into the enclosure through an opening upstream of a growth surface of said crystal,

removing from the enclosure through an ~~providing a separate~~ opening downstream of the growth surface of said crystal ~~to remove~~ a continuous flow of remaining vapor species not having been deposited under conditions yielding to growth of said crystal, and

providing in the enclosure an ~~additional~~ etching gas flow containing at least one halogen element, in such a way that, said gas flow is heated and decreases a deposition rate of solid phases downstream of the growth surface of said crystal.

2. (currently amended) The method according to claim 1, further comprising:

heating at least one region of the growth enclosure in the upstream vicinity of said crystal to a temperature of at least 1900 °C, ~~and preferably in the range of 2000 to 2600 °C,~~

continuously feeding at least a silicon gas precursor ~~such as silane, a chlorosilane or a methylsilane~~, and either an hydrocarbon gas precursor or a combination thereof with vapor sublimed from a solid or liquid source towards said crystal, and

providing said additional etch gas flow ~~containing preferably~~ comprising at least Cl or F.

3. (original) The method according to claim 2, further comprising:

providing said additional etch gas flow consisting of chlorine (Cl2) or hydrogen chloride (HCl) or hydrogen (H2) or fluorine (F2) or a mixture thereof.

4. (currently amended) The method according to claim 1, further comprising:

heating at least one region of the growth enclosure in the upstream vicinity of said crystal to a temperature of at least 1100 °C, ~~and preferably in the range of 1200 to 2200 °C,~~

continuously feeding at least a gallium or aluminum metalorganic precursor and a nitrogen containing gas towards said crystal, and

providing said additional etch gas flow ~~containing preferably at least Cl or I~~.

5. (original) The method according to claim 4, further comprising:

providing said additional etch gas flow consisting of chlorine (Cl2) or hydrogen chloride (HCl) or hydrogen (H2) or hydrogen iodide (HI) or iodine (I2) or a mixture thereof.

6. (original) The method according to claim 1, further comprising:

placing the seed on a seed holder being mounted on a rotating and pulled shaft and

feeding said additional etch gas flow through the shaft to be delivered downstream of the growth surface of said crystal.

7. (original) The method according to claims 1, further comprising:

feeding said additional etch gas flow into at least one channel emerging from a heated crucible into a region upstream of an initial position of the seed crystal before it is pulled for a substantial amount of time.

8. (currently amended) The method according to claim 1, ~~where~~ wherein said additional etch gas flow is fed into a conduit formed between an outer heater and an inner crucible, said inner crucible extending along a symmetry axis parallel to said crystal growth direction and terminating in the immediate upstream vicinity of the initial seed crystal position.

9. (currently amended) The method according to claim 1, ~~where~~ further comprising:

continuously feeding a carrier gas ~~is continuously fed~~ with the vapor species mixture ~~containing~~ comprising at least the elements of the compound crystal, said carrier gas ~~being either~~ comprising hydrogen, nitrogen, helium or argon or a blend thereof.

10. (currently amended) The method according to claim 1, where a halogen to hydrogen ratio of the ~~gases of any of the individual additional etch~~ etching gas ~~flows~~ flow is adjusted to a value ~~preventing~~ operative to prevent formation of solid deposits along ~~the~~ a surface desired to be maintained free of solid deposits.

11. (currently amended) The method according to claim 1, further comprising:

utilizing ~~where said additional etch~~ a flow rate and a delivery means of the etching gas flow ~~rate and its delivery means are used~~ to control ~~the~~ a crystal diameter~~, either keeping the crystal substantially cylindrical or allowing the crystal to expand during the process~~.

12. (currently amended) A device for producing large, single polytype, compound crystals of one of a) silicon carbide, b) a group III-nitride c) alloys thereof, the device comprising:

a susceptor having circumferential walls surrounding a room for receiving a seed crystal,

means for continuously feeding in a vapor state or in a liquid state at least one of the elements of said crystal through one or several conducts upstream of a growth surface of said crystal,

means for continuously removing from the room ~~the~~ a flow of remaining vapor species not having been deposited under conditions yielding to growth of said crystal, while maintaining a predefined pressure in the growth room,

means for heating the susceptor and thereby the seed crystal to a predetermined process temperature,

the device further comprising one of more of:

means to continuously feed and control an etching gas mixture comprising an halogen ~~and hydrogen~~ into a conduit of a rotating shaft supporting a seed crystal holder and said conduit communicating with a region downstream of the seed crystal,

means to continuously feed and control an etching gas mixture comprising an halogen ~~and hydrogen~~ into conduits designed to open into a downstream room of the susceptor, said downstream room being in contact with an upstream room of the susceptor extending until the initial position of the seed holder,

means to continuously feed and control an etching gas mixture comprising an halogen ~~and hydrogen~~ into a circumferential conduit delimited by the inner wall of the upstream room of

the susceptor and the outer wall of an inner crucible, said inner crucible extending along a ~~symmetry~~ axis parallel to said crystal growth direction and terminating in the immediate upstream vicinity of the initial seed crystal position.

13. (original) The device according to claim 12, wherein said elements for growth of said compound crystal are supplied jointly or separately by a silane, chlorosilane or methylsilane gas source and by an hydrocarbon gas source, or by a metalorganic gallium or aluminum containing gas source and a nitrogen containing gas source.

14. (original) The device according to claim 12, further comprising

means to independently adjust and vary over time the heating energy applied to the downstream susceptor room and the upstream susceptor room, said heating energy being supplied either by RF induction or by resistive heating or by a combination thereof.

15. (original) The device according to claim 12, further comprising

means to vary in a controlled manner over time the amount and ratio of halogen and hydrogen elements in the etching gas mixture.

16. (currently amended) A device for producing large, single polytype, compound crystals of one of a) silicon carbide, b) a group III-nitride c) alloys thereof, the device comprising:

a crucible having circumferential walls surrounding a room for receiving a seed crystal in ~~its upper~~ a downstream part of said room and a solid source material, ~~for example a powder,~~

~~containing the~~ comprising elements of the compound semiconductor to be grown,

means for heating the susceptor and establishing a temperature between the source material and the seed crystal,

effusion openings in the crucible, and

means to feed or diffuse a continuous flow of a gas mixture ~~containing~~ comprising at least one halogen element in the immediate vicinity of said effusion opening so as to maintain over a desired amount of time said opening free of solid deposits resulting from the condensation of any vapors sublimed from the source material.

17. (new) The device according to claim 16, wherein the solid source material comprises a powder.

18. (new) The method according to claim 2, wherein the at least a silicon gas precursor comprises silane, a chlorosilane or a methylsilane.

19. (new) The method according to claim 2, wherein the at least one region of the growth enclosure in the upstream vicinity of the crystal is heated to a temperature in a range of 2000 to 2600 °C.

20. (new) The method according to claim 4, wherein the at least one region of the growth enclosure in the upstream vicinity of said crystal is heated to a temperature in the range of 1200 to 2200 °C.

21. (new) The method according to claim 4, wherein the additional etch gas flow comprises Cl or I.

22. (new) The method according to claim 11, wherein the crystal diameter is controlled to either maintain the crystal substantially cylindrical or allow the crystal to expand.